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| EXAMINER |
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BARON, HENRY

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2616

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02/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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| Office Action Summary | Application No. 10/766,980 | Applicant(s) SCHMIDT, JOACHIM | |
| | Examiner Henry Baron | Art Unit 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments/Remarks

1. Claims 1-21 are presented for examination in the present application and remain pending upon entry of the instant amendment. Claims 1, 2, 8, 9, and 18 have been amended to correct errors.
2. Applicant's arguments filed 11/16/2007 have been fully considered but they are not fully persuasive.
3. Applicant traverses the rejections submitting that the Office Action has failed to complete the underlying factual inquiries necessary during an obviousness analysis failing to resolve the level of one of ordinary skill in the art and thus has failed to meet the burden necessary to establish a prima facie case of obviousness.
4. Applicant submits that independent claims 1 and 9 are not disclosed or suggested by the proposed combination of Soltysiak and Ambramovitch as they recites the step of "safety-based monitoring of an error- based limit value, which is and/or can be predetermined, being carried out on a transmission medium for response to identified incorrectly transmitted data packets and identified correctly transmitted data packets". Soltysiak only discloses identifying and counting bit errors that occur during a predetermined monitoring period Abramovitch "teaches that the DUT is effectively a transmission media across which an expected data record is sent and received". Applicant submits that the proposed combination of cited art fails to disclose or suggest independent claim 1, or claims 2-8 that depend therefrom. Applicant submits a like argument for claim 9 or claims 10-21 that depend therefrom.
5. Examiner notes that MPEP 904.01 states that "The breadth of the claims in the application should always be carefully noted; that is, the examiner should be fully aware of what the claims do not call for, as well as what they do require. During patent examination, the claims are given the broadest reasonable interpretation consistent with the specification. See *In re Morris*, 127 F.3d 1048, 44 USPQ2d 1023 (Fed. Cir. 1997).".

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6. Examiner replies that, Soltysiak teaches more than counting bit errors that occur during a predetermined monitoring period but of monitoring a transmission of data packets between at least two network subscribers, comprising of a safety-based monitoring of an error-based limit value (2: [0012] read detection threshold) being carried out on a transmission medium (1: [0006] read SONET) for response to identified incorrectly transmitted data packets and identified correctly transmitted data packets (1: [0008] read BER e.g. bit error rate); transmitting a data record within a payload data in each data packet; (Figure 1; SONET STS frame).

7. In Soltysiak, network subscribers are nodes in a SONET network; a packet or collection of bits is a frame, safety-based monitoring of an error-based limit value is monitoring of excessive bit errors for which an alarm is set when a threshold or error-based limit value is exceeded. A bit error is indicative that a frame or packet is in error thus identifying an incorrectly transmitted data packet. Once identified and given a packet data rate, the balance of packets are correctly transmitted data packets. Bit error rates are derived from encoding packets or frames with an error correction schemes such as forward error correction (FEC), Reed-Solomon, or cyclic redundancy checks (CRC), thus protecting the packet. If circumstances warrant a receiving network subscriber can expect a data record element. This element, absent from Soltysiak, is taught by Abramovitch. Albeit in a different communication context, this concept is taught where a pattern generator generates a pre-determined pattern that resides in a receiving network subscriber.

8. With the teachings and suggestions of Soltysiak and Abramovitch, the motivation to combine by a non-automata person of ordinary skill at the time of the invention is receiving a pre-determined record is more efficient and reliable than receiving the entire packet which subsequently must be decoded.

9. For these reasons, the Examiner sustains the rejection.

Claim Rejections - 35 USC § 103

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1- 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soltysiak, Et al, (U.S. Patent Application 20030021234), hereafter Soltysiak, in view of Abramovitch et al (U.S. Patent Application 20030063566), hereafter Abramovitch.

3. Regarding Claim 1, 9, 16, and 20, Soltysiak teaches an apparatus, a network having a apparatus and method for monitoring a transmission of data packets between at least two network subscribers (Figure 4), comprising of a safety-based monitoring of an error-based limit value (2: [0012] read detection threshold) being carried out on a transmission medium (1: [0006] read SONET) for response to identified incorrectly transmitted data packets and identified correctly transmitted data packets (1: [0008] read BER e.g. bit error rate); transmitting a data record within a payload data in each data packet; (Figure 1; SONET STS frame).

4. Soltysiak's teaching are directed to a method and apparatus for a burst tolerant excessive bit error rate alarm detection and does not teach the expected data record element, i.e. data record element expected by at least one network subscriber that can be used to determine whether a data packet has been transmitted correctly.

5. By contrast, Abramovitch teaches in the context of multiplexing and de-multiplexing communication channels for devices under test (DUT). (1: [00003]) of sending an expected data record between two network subscribers. In Abramovitch an expected data record is generated (2: [0015] read pattern generator that generates pre-determined pattern for input to DUT). The expected data record is

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transmitted across the DUT and received by one network subscriber i.e. the analyzer that compares the received data to the known pattern. (2: [0015] and Figure 1). Abramovitch teaches that the DUT is effectively a transmission media across which an expected data record is sent and received. Abramovitch teachings are not restricted to DUT, but to telecommunication formats such as SONET or SDH and their packet formats. (2: [0017], 4: [0034] and 5: [0036]).

6. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the excessive bit error rate alarm detection teachings of Soltysiak with the pattern generation and analysis teachings of Abramovitch in order to improve the reliability of critical data delivery.

7. This modification would enable critical data to be reliably and expediently delivered over a noisy communication channel with the recognition of the expected data record by a receiving network subscriber. This delivery mechanism is advantageous, as the receiving network subscriber need only match the expected data record to its stored record in order to proceed with an action. This is more efficient than receiving the entire packet and subsequently decoding it e.g. CRC.

8. In reference to Claim 2 and 10, in 2: [0022] (read detection time base TBDV and detection threshold THDV), Soltysiak teaches evaluating identified incorrect data packets and identifying correct data packets in each definable time interval. (1: [0007] i.e. BIP-8).

9. With regards to Claim 3 and 19, Soltysiak teaches of forming a ratio of identified incorrect data packets to identified correct data packets. (3: [0029] read resettable frame and error counter of state machine).

10. In reference to Claim 4 and 11, Soltysiak teaches of STS frame (Figure 1) with transport overhead and the synchronous payload envelope (i.e. STS-1 envelope capacity). The pre-defined record or pattern-generated data of Abramovitch or address records can be incorporated into the synchronous payload envelope.

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11. In reference to Claims 5 and 12, Soltysiak teaches the monitoring is carried out on the basis of a discrete transmission channel without any memory by means of a functional relationship (3: [0026] and Figure 3) and is based on a Bernoulli distribution, between the probability of receiving an incorrect data record of a specific length ((1: [0011] code violation count) and a maximum error rate which can be predetermined. (2: [0024] read Bernoulli distribution as discrete periodic or random distribution of errors and Table 2 for pre-determined maximum error rate and time).

12. With regards to Claim 6 and 13, Abramovitch teaches the error-based limit value is defined as a product of an error rate, which is or can be predetermined, and a number of bits within the expected data record. (4: [0034]).

13. In reference to Claim 7, 8, 14, 15, and 21 Abramovitch teaches the monitoring performed by at least one slave or monitoring subscriber (Figure 1 i.e. error analyzer) and/or at least one master or waiting subscriber. (Figure 1 i.e. pattern generator) with means to transmit appropriate information.

14. In regards to Claim 17, Abramovitch teaches a network comprised of a bus system that is in the form of a line. (Figure 1).

15. In reference to Claim 18, Abramovitch teaches the use of a network comprising a function selected from the group consisting of: for the process industry and for the manufacturing industry as the DUT in the network can be for example, semiconductor processing (testing) and/or for card manufacturing. (Abstract and 1: [0004]).

FINAL ACTION

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date

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of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent Application 20030181998, Device for reliably generating signals, teaches many of the concepts of this application. See, in particular (2: [0014]) “.. Monitoring means 20 checks if incoming trigger signal 18 matches an expected trigger signal..”

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry Baron whose telephone number is (571) 270-1748. The examiner can normally be reached on 7:30 AM to 5:00 PM E.S.T. Monday to Friday.

18. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

19. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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